

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

What is claimed is:

1. (Currently Amended) A power supply arrangement ~~for supplying power from a battery (2) to an electric load (3; 23), said arrangement circuit~~, comprising:

a controlled switch (4; 34; 44) having a first state in which a connection is provided from ~~[[the]] a battery (2) to the load (3; 23)~~ to a load, and a second state in which the load (3; 23) is disconnected from the battery ~~[[(2)]]~~, and

control circuitry (5; 8; 9) for controlling the state of the controlled switch (4; 34; 44) ~~characterized in that the control circuitry (5; 8; 9) is arranged~~ configured to be disconnected from the battery ~~[[(2)]]~~ when the controlled switch (4; 34; 44) is in its second state.

2. (Currently Amended) ~~[[A]]~~ The power supply arrangement circuit according to claim 1, further comprising ~~characterized in that a~~ manually operated switch (16) ~~arranged to be operated manually is provided~~ in parallel to the controlled switch (4; 34; 44).

3. (Currently Amended) ~~[[A]]~~ The power supply arrangement circuit according to claim 1, ~~characterized in that~~ further comprising a back-up power storage ~~[[(22)]]~~ source for supplying power to the control circuitry (5; 8; 9), when the controlled switch (4; 34; 44) is in its second state, ~~is provided~~.

4. (Currently Amended) ~~[[A]]~~ The power supply arrangement circuit according to ~~any one of claims 1 to 3 characterized in that~~ claim 1, wherein the controlled switch comprises ~~[[a]]~~ at least one Field Effect Transistor (34).

5. (Currently Amended) [[A]] The power supply arrangement circuit according to ~~any one of claims 1 to 4~~ characterized in that claim 1, wherein the controlled switch is implemented as a disable switch of a voltage regulator (44).

6. (Currently Amended) [[A]] The power supply arrangement circuit according to ~~any one of claims 1 to 5~~ characterized in that claim 1, wherein the control circuitry (5, 8, 9) ~~comprises means (8, 9) for monitoring~~ is adapted to monitor the battery voltage and ~~switching said switch the~~ controlled switch (4; 34; 44) to its second state when a voltage below a predefined reference value is detected.

7. (Currently Amended) [[A]] The power supply arrangement circuit according to ~~any one of claims 1 to 6~~, characterized in that it is claim 1, arranged to supply power to a mobile telephone (23).

8. (Currently Amended) A method of protecting a battery (2) from over-discharge, comprising the steps of:

~~said battery (2) being connected~~ connecting a battery through a controlled switch (4; 34; 44) to an electric load (3; 23) under control of control circuitry (5, 8, 9);

~~said controlled switch (4; 34; 44) having~~ providing a first state of the controlled switch in which a connection is provided from the battery (2) to the electric load (3; 23), and

~~wherein the load (3; 23)~~ providing a second state of the controlled switch in which the electric load and the control circuitry is disconnected from the battery (2) by bringing the controlled switch (4; 34; 44) to a second state,

~~characterized in that the method comprises the step of disconnecting the control circuitry (5, 8, 9) from the battery (2) when the controlled switch (4; 34; 44) is in its second state.~~

9. (Currently Amended) [[A]] The method according to claim 8, characterized in that the method comprises further comprising the step of providing coupling a

manually operated switch (16) ~~arranged to be operated manually~~ in parallel to the controlled switch (4; 34; 44).

10. (Currently Amended) [[A]] The method according to claim 8, ~~characterized in that the method comprises~~ further comprising the step of supplying power from a back-up power storage (22) to the control circuitry (5; 8; 9), when the controlled switch (4; 34; 44) is in its second state.

11. (Currently Amended) [[A]] The method according to ~~any one of claims 8 to 10 characterized in that the method comprises~~ claim 8, further comprising the steps of monitoring the battery voltage, and switching [[said]] the controlled switch (4; 34; 44) to its second state when a voltage below a predefined reference value is detected.

12. (New) The power supply circuit of claim 1, wherein the control circuitry further comprises a micro-controller configured to control the controlled switch.

13. (New) The power supply circuit of claim 1, wherein the control circuitry further comprises a microprocessor configured to control the controlled switch.

14. (New) The power supply circuit of claim 1, wherein the control circuitry is integrated with a battery.

15. (New) The power supply circuit of claim 1, wherein the control circuitry is integrated with a mobile telecommunications device.

16. (New) The power supply circuit of claim 1, wherein the control circuitry is integrated with a mobile terminal device.

17. (New) The power supply circuit of claim 1, in combination with a Lithium-Ion or Lithium polymer type battery.

18. (New) The power supply circuit of claim 2, further comprising the manually operated switch operable to power up the control circuitry and cause the controlled switch to enter its first state when the load and control circuit are coupled to the battery.

19. (New) The power control circuit of claim 3, wherein the back-up power storage is a capacitor.

20. (New) The power control circuit of claim 3, wherein the back-up power storage is a back-up battery.